

REMARKS

Claims 6 – 9 remain in this application. Claims 7 – 9 have been amended.

Claims 7 – 9 were amended to correct a typographical error in the claims that applicant did not previously recognized. In the Preliminary Amendment mailed January 13, 2003 in connection with the filing of an RCE in this application, applicant added new claims 5 – 8. In the Office Action mailed March 12, 2003, the examiner noted that the application originally contained claims 1 – 5 (not 1 – 4), so the new claims should have been numbered 6 – 9 and would be renumbered as such. Claim 5 had appeared in the original PCT application, was not presented in the Preliminary Amendment dated May 3, 2001 or the Substitute Preliminary Amendment dated November 1, 2001 (both filed in connection with entry into the National Phase in the U.S.), and was formally canceled in the Response to the Office Action mailed March 12, 2003 (see Response mailed July 30, 2002). In applicant's response mailed June 12, 2003, applicant amended claims 6 – 9 but did not realize that dependent claims 7 – 9 still referenced claim 5 instead of claim 6 (new claim 5 was renumbered claim 6). This dependency obviously makes no sense, hence applicant has now amended dependent claims 7 – 9 to depend from independent base claim 6 as was originally intended. Nevertheless, it appears and must be the case that claims 7 – 9 have been examined as though they depended from claim 6 rather than claim 5.

In further response to the Office Action dated August 27, 2003, applicant respectfully requests reconsideration of claims 6 – 9.

The examiner has rejected claims 6 – 9 under 35 U.S.C. Section 103(a) as being unpatentable over Leighton (WO 98/27279) in view of Kivimaa et al. (U.S. Patent No. 5,178,731) and further in view of Boucher (U.S. Patent No. 5,032,229). Applicant respectfully traverses this rejection.

To begin, the examiner states that Leighton discloses a double doctor assembly having two doctor blades. Applicant agrees with this statement. Leighton, however, further discloses the following in regards to prior art doctors. First, the purposes of paper machine doctors are to prevent the paper web from wrapping around the roll

should the web break during production, to keep the roll clean from contaminants, and to remove the paper web from the roll during start-up. (See Leighton, page 1, second through fifth paragraphs). Second, Leighton discloses that the purpose of prior art double doctors is “to isolate a sector of the roll face to enable it to be thoroughly washed.” (See Leighton, page 4, third paragraph). The first blade removes the paper web when necessary and keeps the roll face free of contaminants while the second blade acts as a water seal to prevent wash water from the wash showers from passing and thereby re-wetting the paper web. (See Leighton, page 4, fifth paragraph). The current invention has an entirely different purpose, which is to remove water from holes in a suction roll. Moreover, one skilled in the art would never replace the first doctor blade of Leighton with a doctor slat of Kivimaa, because a doctor slat isn’t reliable as preventing paper from wrapping around the roll. Kivimaa clearly states that the function of a doctor slat is to remove water from the holes in a suction roll (see, for example, the first sentence of the Abstract). Hence, replacing the first blade in Leighton with a slat would render the intended purposes of Leighton unattainable, and therefore is not a substitution that is obvious to one skilled in the art.

The examiner also states that Leighton discloses that the first blade creates a “foil effect.” Applicant agrees that Leighton does refer to a “foil effect,” specifically on page 3, first and second paragraphs. Applicant asserts, however, that Leighton refers to the “foil effect” as a side effect that occurs when the speed of the paper machine is increased to high speeds. This “foil effect” is small and undesirably pulls furnish (pulp and fiber material) out of the pores of the roll. These crumbs may either tear the web or cause damage to the machine. Hence, Leighton considers the “foil effect” caused by the first doctor blade to be a negative occurrence that preferably should be prevented and avoided.

Taking these disclosures of Leighton and Kivimaa into account, applicant respectfully traverses the examiners conclusion that it would have been obvious to one skilled in the art to modify the double doctor blades of Leighton to include a doctor slat of

Kivimaa in the first doctor position. Based on the teachings of Leighton and Kivimaa, one skilled in the art would not have combined these two devices. First, one skilled in the art would not have removed or replaced the first doctor blade of Leighton because that would render Leighton incapable of performing one of its main purposes: preventing the paper web from wrapping around the roll. Second, it is too laborious to change Leighton from an ordinary double doctor for preventing paper from wrapping around the roll to a water removing apparatus for a suction roll because of the need to remove water jets and wiping elements along with the need to install troughs. One skilled in the art therefore would not be inclined to so modify Leighton. Finally and most importantly, one skilled in the art would not obviously replace the first blade of Leighton with the slat of Kivimaa because the small "foil effect" caused by the first blade in Leighton is considered undesirable in Leighton and the slat of Kivimaa would remarkably increase this undesired effect. The prior art embodied in Leighton teaches away from substituting the slat of Kivimaa for the first blade of Leighton and renders the combination of Leighton and Kivimaa non-obvious. Applicant also again points to the Declaration of Expert Juhani Vestola dated June 4, 2003 (filed with the Response dated June 12, 2003) declaring that such a combination was non-obvious to those skilled in the art at the time of the invention.

Next, applicant also argues that it is non-obvious to cover the second blade of the present invention with a trough. Even though Kivimaa teaches a trough under the doctor slat, there is no hint or suggestion to cover a second blade downstream with a trough. Leighton has no trough and, due to strong fuming of the liquid on the roll surface, troughs were not used in Leighton. In the present invention, water instead comes onto the surface of the suction roll in big drops which are possible to collect in a trough. Therefore, there is no teaching in either Leighton or Kivimaa, or any combination thereof, to cover the second blade of the present invention with a trough. Hence, the trough of the present invention is non-obvious.

Furthermore, applicant also submits evidence of secondary considerations, namely that a competitor is now copying the present invention, after applicant filed the

current application and themselves introduced the invention into the market. Applicant points to the advertisement in the August 2003 issue of *Pulp and Paper* (see Exhibit A) in which Essco Incorporated advertises “Double doctors for suction rolls.” In this advertisement, Essco states that a foil blade (i.e., a doctor slat) may be put in the lead position. The picture also shows that there is a trough under the second blade that collects water from the second doctor blade. Both of these features are found in applicant’s present invention. Applicant hereby declares that these features were not included in Essco’s double doctors until Metso brought the present invention onto the market. Therefore, Essco took the teaching from applicant and not from a combination of prior art. This is further evidence that the present invention is non-obvious.

Finally, the examiner states that arriving at the angular spacing between the doctor slat and the doctor blade would have been obvious to one skilled in the art at the time of the invention. Applicant respectfully disagrees with this argument. Leighton utilizes a double doctor blade assembly to remove contaminants from the paper web. Boucher also discloses a double doctor blade assembly for removing contaminants from the paper web. The present double doctor assembly has a different purpose, namely the purpose of more effectively removing water from the pores of a suction roll. The present invention is also novel and is non-obvious over Leighton in view of both Kivimaa and Boucher. Therefore, one skilled in the art could not arrive at the angular spacing of the doctors in the present invention from the angular spacing of the doctor blades in Leighton, Boucher or any other prior art double doctor because those double doctors were arranged to achieve an entirely different result. There is no hint in the prior art as to the necessary angle between a doctor slat and a doctor blade in order to remove the water film raised from the pores of a suction roll. For these reasons, applicant submits that the preferred angle between a doctor slat and a doctor blade was arrived at by engineering the present invention and not by optimizing the teachings of the prior art. Therefore, the angle between the doctor slat and the doctor blade in the present invention is non-obvious.

Applicant submits that for the reasons stated above, the claims are not taught or suggested by the prior art and are therefore patentable. Applicant respectfully requests that the 103(a) rejection of claims 6 – 9 based upon Leighton in view of Kivimaa in further view of Boucher be withdrawn.

This request for reconsideration is felt to be fully responsive to the comments and suggestions of the examiner and to present the claims in better condition for allowance. Favorable action is requested.

Respectfully submitted,

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